

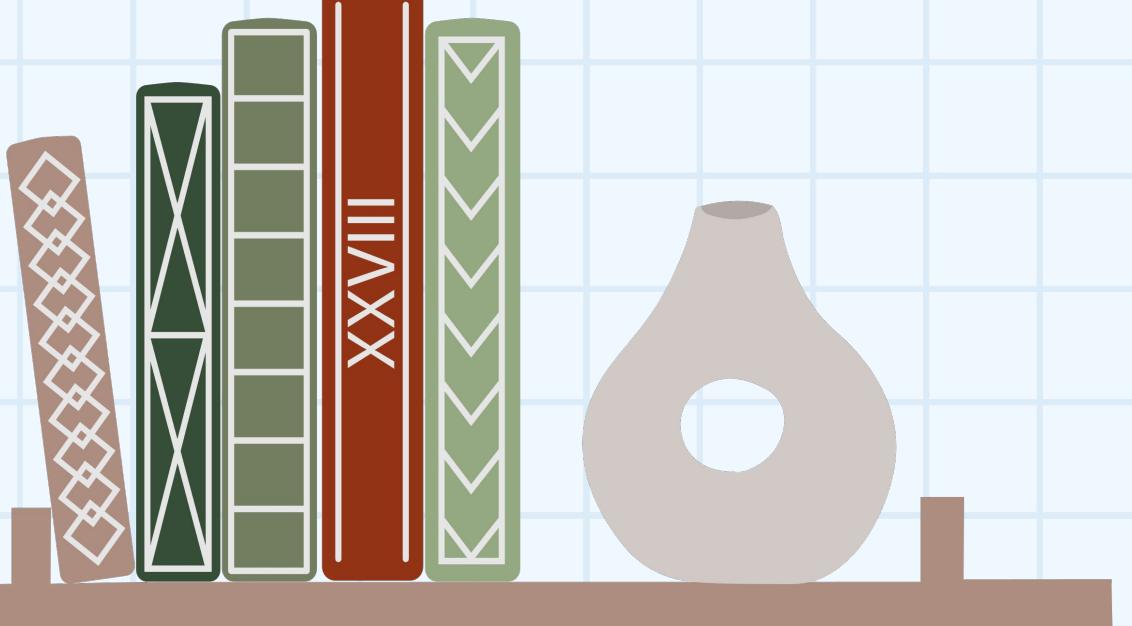
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Applied ai and Data Science

Basics of Data Analytics





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Let's dive into and learn:



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Understanding the Analysis



Understanding the Results

- The first thing you'll do during the interpret stage is to try and answer some basic questions.
 - What was the objective of this analysis?
 - Important to go back to your starting point because that will remind you of the questions you set out to answer.
 - Easy to get lost in the data during the model and explore stages and lose sight of your initial question



Understanding the Results

- Then ask, how does the data answer my questions?
 - E.g. data shows you that the revenue target can be attained by hiring 2 more people
- Ask, what other learnings do I have?
 - In answering one question, you will often find new pieces of potentially useful information that help solve other problems
 - Or maybe they open up new potential business objectives you can



Understanding the Results

- How confident should I be in my results?
- If you see an improvement in a business metric, was it due to the changes you made or was it due to random chance?
- Easy to be overconfident in their results



Understanding the Results

- How do you know if you should be confident in the results of your model?
- In the modelling stage, we often keep a separate set of test data to check your trained model against.
- The testing process is all about ensuring you can be confident in your model



Understanding the Results

- By running your model on test data through your model, you can answer questions like, how wrong is the model on average?
- If the model predicts something, how likely is it to be correct or incorrect?
- Are there particular scenarios that cause the model to be incorrect?



Understanding the Results

- Another way of being confident of your findings is using statistical tests
 - Statistical tests are mathematical methods of ensuring that differences are not caused by random chance.
 - Sometimes this is called the significance of the results



Understanding the Results

- Suppose you're trying to improve an email discount campaign.
- Your model recommends a change that you implement, and you see a 5% increase in sales.
- It is possible that the increase in sales was random or because of some other factor.
- Run a statistical test to see how confident you should be with your results



Understanding the Results

- Interpret phase is crucial because it is where data driven insights are evaluated and communicated
- Revisit your initial analysis objectives
- Understand how the data answers your questions
- Uncover any additional findings.
- Goal of the interpret phase and data analysis overall is not just to gain insights, but to make informed decisions

Recap



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Understanding the results



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Thank you

